UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/634,077	08/04/2003	Daniel Christian Shavers	DN2002153	5234

27280 7590 06/29/2005

THE GOODYEAR TIRE & RUBBER COMPANY
INTELLECTUAL PROPERTY DEPARTMENT 823
1144 EAST MARKET STREET
AKRON, OH 44316-0001

EXAMINER	
SUN, XIUQIN	

ART UNIT	PAPER NUMBER
2863	

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/634,077	SHAVERS ET AL.	
	Examiner	Art Unit	
	Xiuqin Sun	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 June 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *7 and 8* is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☒ Claim(s) *9 and 10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 9 and 10 are objected to because of the following informality:

1) Claim 9, line 1, please replace "The apparatus wherein the" with – The apparatus of claim 7 wherein the" –.

2) Claim 10 is objected to as being dependent upon an objected base claim 9.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-3, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wada et al. (U.S. Pat. No. 5485406) in view of Hofelt, Jr. et al. (U.S. Pat. No. 3914907).

In regard to claim 1:

Wada et al. teach a method of measuring the radial runout variation across the peripheral surface of the tread elements of a tire; comprising the steps

of: locating the tire's center axis (col. 3, lines 15-22); rotating the tire about its axis and determining a radial low point on the tread elements peripheral surface in each of several circumferential planes between the tread shoulders (col. 3, lines 15-50); determining a virtual tread profile from the radial low points (cols. 1-2, lines 53-1; col. 2, lines 21-44; and cols. 6-7, lines 62-3).

Wada et al. do not mention explicitly: engaging a tread removal means to remove tread rubber to match the tread profile to the virtual tread profile.

Hofelt, Jr. et al. disclose a method for improving the ride characteristics of tires, including: engaging a tread removal means to remove tread rubber to match the tread profile of a tire under treatment to a specified virtual tread profile (col. 4, lines 21-27; col. 5, lines 15-21, lines 38-57; col. 8, lines 14-17; cols. 8-9, lines 48-20; cols. 10-11, lines 50-6 and col. 11, lines 23-27).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Hofelt, Jr. et al. in the invention of Wada et al. in order to not just measure but also correct the non-uniformity of the tread elements of a tire (Hofelt, Jr. et al., col. 4, lines 6-17).

In regard to claims 2 and 3:

Wada et al. do not mention explicitly: the measurements are taken in at least three and five circumferential planes.

It is however obvious that the apparatus and method of Wada et al. is generic enough and capable of taking the measurements in any circumferential plane by moving the Y detection means in parallel to the X-axis (Wada et al., Abstract; Figs. 1A and 1B). It would have been obvious to one having ordinary

skill in the art to place the Y detection means at any desired locations (e.g., three or five different locations) on the X-axis to perform the measurements (Wada et al., Abstract).

In regard to claims 5 and 6:

Wada et al. do not mention explicitly: controlling the movement of the tread removal means by directing the movements to follow the virtual template; controlling the rotational movement of the tire as the tread removal means traverses across the tread.

The teaching of Hofelt, Jr. et al. includes: controlling the movement of the tread removal means by directing the movements to follow the virtual template (Fig. 6; col. 5, lines 15-21, lines 38-57; col. 8, lines 14-17; cols. 8-9, lines 48-20; cols. 10-11, lines 50-6 and col. 11, lines 23-27); controlling the rotational movement of the tire as the tread removal means traverses across the tread (Fig. 6; col. 5, lines 15-21, lines 38-57; col. 8, lines 14-17; cols. 8-9, lines 48-20; cols. 10-11, lines 50-6 and col. 11, lines 23-27).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Hofelt, Jr. et al. in the invention of Wada et al. in order to correct effectively the radial runout of the tread elements of a tire (Hofelt, Jr. et al., col. 4, lines 6-17).

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wada et al. (U.S. Pat. No. 5485406) in view of Hofelt, Jr. et al. (U.S. Pat. No. 3914907), as applied to claim 1 above, and further in view of Reese (U.S. Pat. No. 6237402).

Wada and Hofelt, Jr. et al. teach a method that includes the subject matter discussed above. Wada and Hofelt, Jr. et al. do not mention explicitly: the virtual tread profile is asymmetrical.

Reese discloses a method for minimizing the radial runout of a tire and rim assembly, in which said tire comprises a virtual tread profile that is asymmetrical (see Abstract and col. 1, lines 5-11).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Reese in the combination of Wada and Hofelt, Jr. et al., as suggested by Reese (see Abstract), because the method taught by Wada and Hofelt, Jr. et al. is deemed to be generic enough to be applicable to an off-the-road tire.

Allowable Subject Matter

5. Claims 7 and 8 are allowed.

Reasons for Allowance

6. The following is an examiner's statement of reasons for allowance:

The primary reason for the allowance of claims 7-8 is the inclusion of the limitation of a truing device assembly mounted on a movable carriage, the carriage having linear bearings attached to the guide rail bearings. It is this limitation found in each of the claims, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Response to Arguments

8. Applicant's arguments filed 06/09/2005 have been fully considered but they are not persuasive.

Applicants argue that the references fail to disclose or suggest the claimed steps that "the radial low point on the tread elements peripheral surface in each

of several circumferential planes between the tread shoulders is determined. Then a virtual tread profile from the radial low points is determined. Then a tread removal means removes tread rubber to match the tread profile to the virtual tread profile".

Examiner's position is that Wada et al. discloses determining a radial low point on the tread elements peripheral surface in each of several circumferential planes between the tread shoulders (col. 3, lines 15-50); and determining a virtual tread profile from the radial low points (cols. 1-2, lines 53-1; col. 2, lines 21-44; and cols. 6-7, lines 62-3). And, Hofelt, Jr. et al. disclose engaging a tread removal means to remove tread rubber to match the tread profile of a tire under treatment to a specified virtual tread profile (col. 4, lines 21-27; col. 5, lines 15-21, lines 38-57; col. 8, lines 14-17; cols. 8-9, lines 48-20; cols. 10-11, lines 50-6 and col. 11, lines 23-27).

Prior Art Citations

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1) Schartz et al. (U.S. Pat. No. 6739186) disclose a method for minimizing the radial runout of a tire and rim assembly.
2) Shteinhauz (U.S. Pub. No. 20020177964) disclose methods and apparatus for predicting tire uniformity.

3) Williams et al. (U.S. Pat. No. 6615144) disclose methods and apparatus for predicting tire uniformity.

Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xiuqin Sun whose telephone number is (571)272-2280. The examiner can normally be reached on 6:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571)272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MICHAEL NGHIEM
PRIMARY EXAMINER

Xiuqin Sun
Examiner
Art Unit 2863

XS
June 27, 2005